## Service manual

# Coffee Queen Espressomachines

**Compact**

**Digital 2 groups**

**Digital 3 - 4 groups**

# Crema Compact Digital

S / GB

Your retail dealer

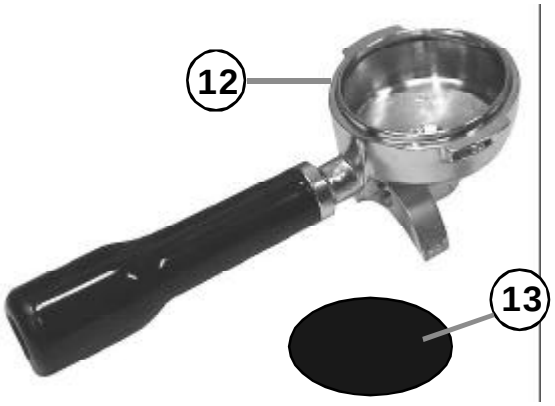
**Rev.041004**

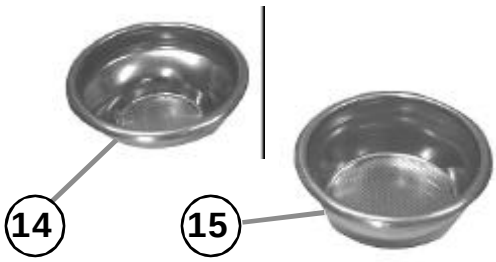
# 1. Table of contents Crema Compact och Crema Digital


| | | |
|---|---|---|
| **1**. | **Table of contents** | sida 2 |
| **2.** | **Orientation** | 3 |
| **3**. | **Introduction** | 4 |
| **4**. | **Contemplated use and warnings** | 5 |
| **5**. | **Technical description** | - |
| | 5.1 Overview of the espresso coffee machines Crema Comp/Dig | 5 |
| | 5.2 Operating Principles | 6 |
| | 5.3 Operation for espresso machine model Crema Compact/Digital | 6 |
| **6**. | **Safety precautions** | 6 |
| **7**. | **Installation - Location - Start up** | - |
| | 7.1 Precautions for installation | 7 |
| | 7.2 Locations and connections | 8 |
| | 7.3 Start up | 8 |
| | 7.4 P semi-automatic version operation On-Off | 8 |
| | 7.5 Digital automatic version dose programming | 9 |
| | 7.6 Failure message | 10 |
| | 7.7 Automatic cleaning of the groups | 11 |
| **8**. | **User instructions** | 12 |
| | 8.1 Normal operating values | 12 |
| | 8.2 How to make espresso coffee | 13 |
| | 8.3 How to make cappuccino | 13 |
| **9**. | **Maintenance** | - |
| | 9.1 Daily cleaning | 14 |
| | 9.2 Weekly cleaning | 14 |
| | 9.3 Instructions for regenerating descaling filter | 15 |
| **10**. | **Faults and routine repairs** | 16- 19 |
| **11**. | **Shut-down and dismantling** | 19 |
| **12**. | **Technical Data** | 20 |
| **13**. | **Spare part list** | 21-22 |
| **14**. | **Exploded view** | 23-27 |
| **15**. | **Flow diagram (comp machines)** | 28 |
| **15**. | **Flow diagram (dig machines)** | 29 |
| **16**. | **Electrical diagram** | 30 |

## 2. Orientation

1. Steam pipe
2. Tap handgrip (steam)
3. Manometer
4. Tap handgrip (hotwater)
5. Brew switch (manual)
6. Push-button pad
7. Tap handgrip (steam)
8. Main switch
9. Indication light
10. Drip tray
11. Outlet (hotwater)
12. Handgrip for filterholder
13. Rubber spacer (for automatic cleaning).
14. 1 cup filter
15. 2 cup filter
16. Handle (steam pipe)



**Save; your manual and instructions:**

**The manual** is dedicated the user and/or an authorized personel. It will give you information how to use the machine in a correctly way, desirable maintenance and a good safety and security for the user.
The manufacturer is not responsible for personnel damage or environment damage, caused by the machine, if it has been used in a way, which is different from what prescribes in these instructions.

**This manual must always be available to the user and/or maintenance technician,** who must be informed of the correct
use of the machine and of possible hidden risks. It must be kept in a dry, clean place.

**The information given in this manual does not replace** the safety instructions and technical data for installation and
operating directly affixed to the machine and packaging.

This manual is to be considered as part of the machine and must be kept for future reference until same is dismantled.
**Should you lose it or require further information**, contact your area agent or the manufacturer.

This manual reflects the state of the art at the current time and cannot be considered inadequate merely because it is updated
later on the basis of new developments.

The manufacturer also reserves the right to modify the manual without the duty of updating earlier issues, except in exceptional
basis of new developments.

**If the machine is used incorrectly or in ways, other than described in this manual** it will render any guarantee or
manufacturer´s responsibility condition null and void; it should only be used by a responsible adult.

# 4. Contemplated use and warnings

The espresso coffee machine is an appliance for delivering steam/hot water for the professional preparation of coffee or for obtaining water and/or steam.
Its long lasting, non-toxic components are easily accessible for proper cleaning and maintenance.

**The user must be an adult. The machine must not be used by children or unsuitable people.**

**The user must comply with the safety regulations in force in the country of installation,** as well as with the rules dictated by common sense, and ensure that routine maintenance is carried out regularly and correctly.

The installer, the user and the maintenance technician must inform the manufacturer of possible faults or wear which could affect the system´s original safety.

The installer must check that the environmental conditions are suitable, so as to guarantee safety and hygiene for the operators and users. The various manufacturers are responsible for the commercial components fitted to the machine; the customer is responsible for the people authorized to use the machine.

**Do not expose the machine to the weather (sun, rain, etc. ).**

Long machine stoppages at temperatures as below 0ºC (zero degrees celsius) can cause damage or breakage to the piping boiler ; thus total emptying is recommended.

# 5. Technical description Crema Compact och Digital

## 5.1 Overview of the espresso coffee machines Crema Compact och Digital

**Automatic coffee machines**
Crema Compact och Crema Compact Take Away

Espresso coffee machine with microprocessor controlled electronic measured dosage and digital programming from the push-button pad. Available in 2-group models. Automatic boiler filling is standard. Filter for mixed use either with ground coffee or with coffee pod upon request. The machines is delivered with a Turbo Creme Milk-frothingnozzle and descaling filter.

Crema Digital/2-4 Take Away
Espresso coffee machine with microprocessor controlled electronic measured dosage and digital programming from the push-button pad. Available in 2-3-4 group models. Automatic boiler filling is standard. Filter for mixed use either with ground coffee or with coffee pod upon request. The machines is delivered with a Turbo Creme Milk-frothing nozzle and descaling filter.

**Semi automatic coffee machines**
Crema Compact On-Off och Crema Grande On-Off

Semi-automatic espressomachine with unmeasured brewing and push-button pad.
Delivered with; automatic level regulation of boiler.
Filter for mixed use either with ground coffee or with coffee pod upon request and descaling filter.

### 5.2 Operating Principles

An espresso coffee machine is basically made up of the following elements:

**Boiler**

Is used to contain the hot water and steam.. Made of copper to get a equal temperature over the year.

**Brewing group and heat exchanger**

The brewing group is the component which, when attached to the filterholder, brews and delivers the beverages when supplied with hot water. (Containing the filter and the ground coffee or coffee pod).
The heat exchangers, one for each group, are immersed in the water and are used for fast heating of the fresh water from the network to the optimal temperature and to prevent thermal imbalances within the system.

**Heat source**

This is normally provided by an electric heating element immersed in the boiler and/or by an external gas burner , which heat the water and provide the steam.

**Electric pump**

This device is used to raise the pressure of the network, which is normally inadequate for the purpose, to a pressure of 9 bars which is ideal for making the best coffee.

**Steam taps**

This allow steam to be delivered to give the indispensable ”froth” to the milk used for preparing cappuccino, for heating water and punches and for preparing chocolate drinks.

**Water tap**

It allows water to be delivered for preparing hot drinks, tea and tisanes.

**Control instruments**

Manometers: show the current pressure in the boiler and in Dig. models the pump´s operating pressure.
Pressure switchest: control the pressure and switching ON/OFF the heat sources to keep the boiler water temperature constant.
Level gauge: shows the water level in the boiler.

5. Technical description Crema Compact och Digital

### 5.3 Operation for espresso machine model Crema Compact och Digital

**Water system diagram**

The water used for production of coffee does not come from the boiler. It is supplied directly from the water net, through the heat exchangers inside the boiler. The hot water and steam surrounding the heat exchangers, give the water inside the right temperature. This is shown in the water system diagram

**Wiring diagram**

The machine is connected to the power supply network by means of the electric cord supplied. See p. 35.

**The main switch**

The machine is fitted with a two-position power switch:
- Position 0: no power supply to the internal components.
- Position 1: power supply to the operational electric components and to the heating element.

## 6. Safety precautions

**Do not tamper with the machine´s components or pull on the electric power cord to unplug it.**
**Never** clean the inside of the machine with the power ON or with the plug connected and do not use detergents or jets of water in any case.
**The operator must not touch the machine with damp or wet hands or feet, or use it with bare feet.** Allthough the machine is earthed, we recommend the use of a wooden foot-board and a centralized life-saving system to prevent the risk of electric schocks as much as possible.
**Grinder shall only be used for coffee beans.** All other usage could be dangerous and must seems like a wrong and defective way to handle the machine.
The manufacturer is not responsible for damage which is caused by improper, unreasonable and/or incorrect usage of machine.
**Warning: Do not try to put in spoons, knife´s or other kitchen / housekeeping tools in the grinder when machine is operating or in use.**

# 7. Installation - Location - Start up Crema Compact och Digital

## 7.1 Precautions for installation

The manufacturer has obviously taken every possible precaution to guarantee user safety, but the different installation and/or transport conditions could give rise to uncontrollable or unpredictable conditions; **so it is always necessary to assess hidden hazards** and to consider the following suggestions:

- **The packing elements** (cardboard, cellophane,metal staples, etc.) can cut, wound or cause accidents if not handled
  carefully or if used incorrectly; do not leave them accessible to children or unsuitable people.
- **Any fault or defect** should be promptly notified to the personnel who are qualified and authorized to carry out installation and maintenance.
- **An earthing connection is mandatory** as is the system´s conformity with the regulations in force in the country of installation. The manufacturer accepts no responsibility for accidents due to non-compliance with the regulations.
- **The use of extensions or flying connections is prohibited.** The working environment is heavily exposed to water and damp which prevent the natural conditions for insulating the system.
- **The machine must only be installed by authorized, qualified personnel.**
- Check the condition of the components and, should defects or faults arise, stop the installation and ask for their replacement.
- Ensure that the power supply voltage (see rating plate) is the same as that of the mains supply network to be used in the place of installation.
- The customer must provide for the machine´s power supply, protecting the line with a suitable safety cut-out (life-saver).

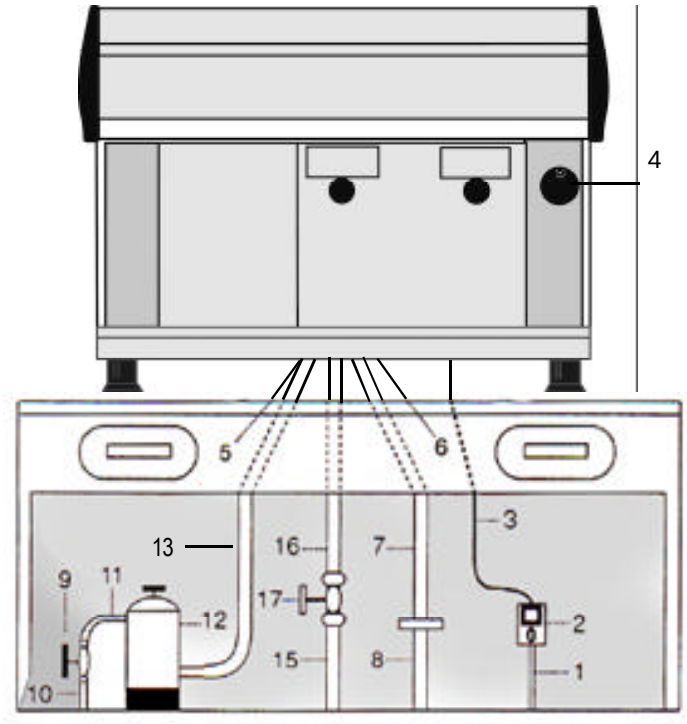
- **<u>It is important</u> to place the machine on a flat surface! Adjust the machine feets and check with a spirit level.**

**Fig. 1 Installation**

1 - Mains electric power supply.
2 - Mains line switch.

3 - Power supply cord.
4 - Main switch.
0-off
1-power supply to controls
5 - Water inlet union.
6 - Drain tray
7 - Drain pipe
8 - Main drain pipe
9 - Water mains tap
10 - Water mains supply line
11 - Hose from water mains to descaling filter
12 - Descaling filter
13 - Hose from descaling filter to water inlet
15 - Pipe from gas tap to gas regulator
16 - Gas supply pipe
17 - Gas tap

**FIG 1**



### 7.2 Locations and connections

**Before** installing the machine it is advisable to check the efficiency of the water mains (pos. 10 fig. 1), of the electrical connections (pos. 1 fig. 1) and of the gas mains ( for gas heated machines). An electric cut out (pos. 2 fig. 1) with fuses rated for the machine´s electrical input is needed for the machine to be properly connected.

**Attention: the earth connection (yellow/green wire) is mandatory.**
Finally the efficiency of the main drain pipe must be checked before it is connected to the machine´s drain pipe (pos. 7 fig. 1).

Hydraulic connections: - Water inlet: pipe3/8 union int D 10/12 mm.
- Drain: pipe int D 16/17 mm.

**Locate the machine** on the shelf and find a suitable position for the water softener (pos. 12 fig. 1).
- Connect the softener to the tap (pos. 9) using the pipe (pos. 11 fig 1).
- Connect the pipe (pos. 13) to the water inlet (pos. 12).
  Connect pipe (pos. 7) to the drain tray (pos. 6) and then to the main drain pipe (pos. 8).
- Place a recipient under the water softener´s discharging pipe ( see regeneration instructions page 10 ).
- Open tap and run the water through for a few minutes to clean the softener.

The pump is equipped with a inlet filter which prevents unwanted particles from the system of water mains, to damage the machine.

**Check and clean the filter every month.**
Make the electrical connections, connecting the power supply cord (pos. 3) to the mains line switch (pos. 2). If the machine is fitted with a gas system, connect it to the pipe (pos. 16 fig. 1) using the tap (pos.17) and adjust it as instructed.

### 7.3 Start up

**- Make sure that the water tap to the machine is open and that the softener´s tap are turned to the left!**

- Turn ON main switch. The machine is fitted with water level control and boiler will be filled automatically with water.. Machine is also equiped with a element defence and must not be filled up before starting up the machine. **Before starting machine, make sure that the water is on.**

**Filling of water stop automatically after 120 seconds.** Turn OFF the machine with the main switch (pos. 4) and turn it ON again after 5 seconds. The filling of water will start again. **Se chap. 7.6 page 9.**

When the water in the boiler reach the right level, the machine stops filling water. Push ON the right button for each group to fill up the heat exchangers. When the water is coming out from the groups in a even stream, turn OFF with the same button.

The water will now heats up and the pressure in boiler accumulates to 1 bar. Meanwhile the water is heating up, place the filter holders in there groups so that the filter holders leaves varm. After brewing allways leave filterholders with coffee grounds in there groups. It is a better way to make coffee if filterholders are varm. After a while you hear a ”ventilated sound” . This is normal. When the pressure are approx. 1 bar and the groups and filterholders are varm. The machine is ready to use.

### 7.4 P semi-automatic version operation On-Off.

Press the switch located above the selected group to start delivery. When the required quantity has been delivered, press the switch again to stop it.

### 7.5 Digital automatic version dose programming:

**To program the doses:** **(fig. 2)**.

1. **Press button** (1) on push-button pad in approx. 8 seconds.
   The Indicator lamps above the other buttons will be switched on.

2. **Now place the empty filterholder in the group (A).**
   **- Choose button and press**.
   Hot water will now starts flow.
   When the water has reached the required level in the cup.
   **Stop the filling by press at the same button once again.**

3. **The settings is now stored in the memory of push-button pad.**
   - And the lamp above the button you stored will be switched off.

4. **The other buttons can be programmed in the same way.**

   If it should take to long time between programming of the other doses.
   All remaining indicator lamps will be switched off;
   Then do the programming again as chapter 1.
   The indicator lamp above the button which not is programmed will be lighting.

5. <u>When you are satisfyed with programming of doses on the first group. Go further to the second group.</u>

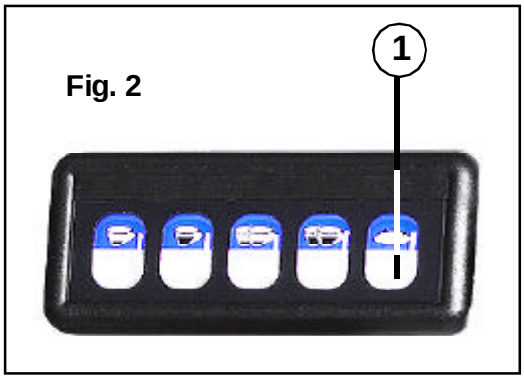
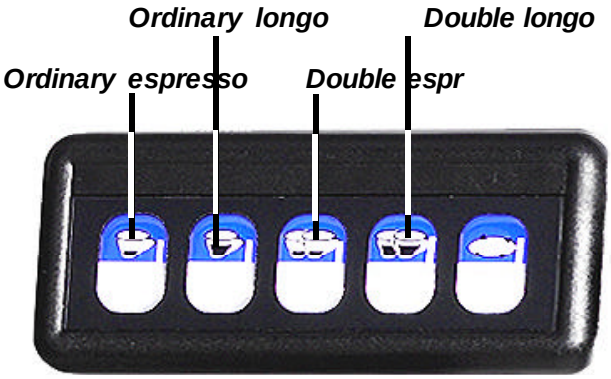



**Fig. 2**

***Recommended quantity of water when programming the doses:***

| | |
|---|---|
| ***Ordinary espresso*** | ***7cl.*** |
| ***Ordinary longo*** | ***9cl.*** |
| ***Double espr*** | ***10cl.*** |
| ***Double longo*** | ***15cl.*** |



### 7.6 Failure message

Finite brewtime for each group are 240 seconds.
If you reach this time indicator lamp start blinking and the group will be blocked.

If the flowmeter operate incorrect, the indic. lamp above the button you pressed will start blinking.
If this should happen you can´t get any doses when machine is brewing.

Still you can do a manuel brewing, by using button (1).

On Model Digital, by using the manuel brew switch (pos. 5 page 3).

To avoid flooding or overflow: The autom water system is equipped with a safety device.

If the water level control solenoid valve remains open for more than 120 seconds; it is automatically switched off and the fault is signalled by indic. lamps are blinking on all the push-button pads.

To restart, the machine power must be removed for at least 5 seconds, and then start the machine again.

**If failure message repeats, please contact authorized personnel or your retail dealer.**

### 7.7 Automatic cleaning of the groups WEEKLY CLEANING:

To start the cleaning program: do as follow:

Unhook the filterholder from the group (A fig. C). Put the 2 cup filter and the rubber pad in filterholder.
(B fig. C) Put 20 gram of detergent in filterholder (C fig. C).
**Detergent can be ordered from your retail dealer or Coffee Queen AB.**

Hook the filterholder in a careful way into the group you want to clean. (D fig. D)
Turn OFF the machine with the main switch. Press button ”double espresso” and keep the button down.
Turn ON the machine with the main switch and the cleaning program will start.
Meanwhile cleaning is going on, approx. 50 seconds, 2 indic. lamps will blinking on the push-button pad.

**Rinse the groups,filterholders from detergen;**
Unhook the filterholders (E fig. E) and rinse the groups,filterholders from detergent. Replace rubber pad from filterholder
(F fig. E) and put filterholder in the group. (G fig. E) Then repeat procedure without detergent to wash clean with water only. Complete cleaning with your cleaning brush, following the machine. Use the cleaning brush to clean the gasket filter holder and bayonet joint in brew groups.

FIG. C

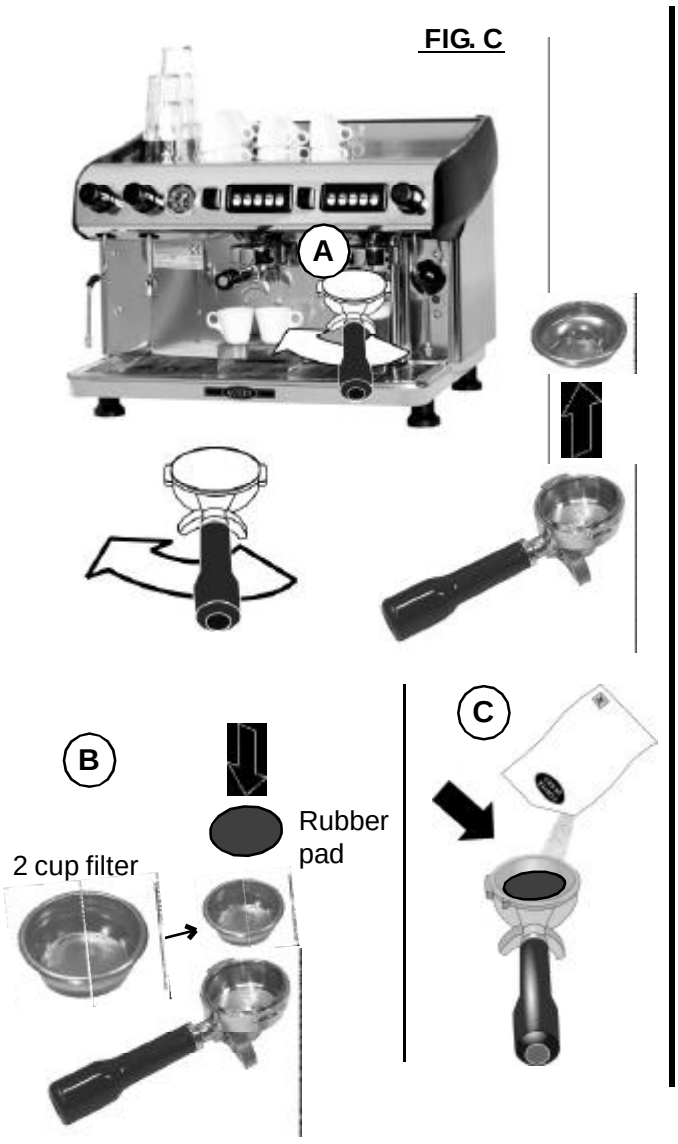
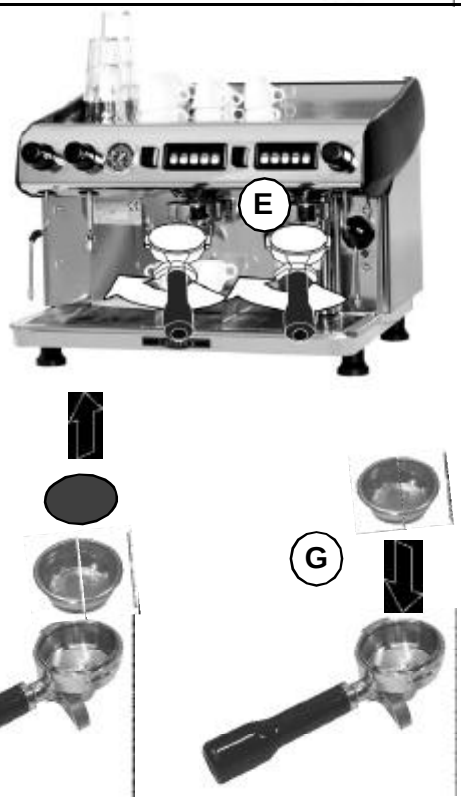



FIG. D

FIG. E



The following should be considered general lines of operating. It is quite essential to follow the manufacturer's instructions and regulations as regards safety.

Operating the machine is very simple.
The checks that the operator obtains good coffee are:

- use suitably softened fresh mains water
- boiler water temperature between 85 °C and 105°C
- delivery time 20-30 seconds
- ground coffee dose between 6 and 7 g.
- constant cleaning of the coffee dosing grinder
- checking the wear of the dosing grinder's grindstones

### 8.1 Normal operating values

Recommended values:

- Pump pressure: 8,5 - 9 bars

  **Pump pressure are factory adjusted. On Digital-model: Reading/Check the pressure on the manometer. To Read/Check the pressure on Compact-model use a special equipment:(filterholder with manometer).**

- Boiler pressure: 0,8 - 1,2 bars.
  Pressure is the red color field on manometer. To regulate the pressure: (turn clockwise to increase pressure and anticlockwise to decrease the pressure).
- Safety valve opening pressure: ± 1.7 bars
- Expansion valve opening pressure: ± 10.5 bars

Adjust opening pressure with a filterholder (sealed) and a manometer. When indicator shows 10,5 bar it will start driping from the expansions valve.

- Coffee delivery temperature: 85°C - 92°C

The temperature depends on the type of blend used; it can be checked with a precision thermometer during delivery.
The pressure switch 's screw can be used for minor adjustments (see boiler pressure).
Allways adjust pressure when you are brewing coffee.

## 8.2 How to make espresso coffee

Remove the filterholder from the group and dispose of the grounds by hitting the edge of the filterholder against the bar in the apposite drawer. Do not hit the filterholder against an unprotected surface; the filterholder's seal could be demaged.
A smart blow should be enough. The small quantity of powder remaining will not have a negative effect on the taste of the coffee.

Fill the filterholder with finely ground coffee. When the filterholder is filled, press down the ground coffee with the special tamp, pushing the filterholder upwards. Clean the edge of the filterholder with the palm of the hand to get rid of excess coffee powder.

This will ensure that the seal between the filterholder and the machine will be perfect.
If a filter for mixed use is being utilized, you can put a coffee pod instead of ground coffee in it. Hook the filterholder in a careful way into the group. When it can be difficult to unhook filterholder after brewing.

After having fitted the filter holder properly, put a previously heated cup under the spout. Two cups are required if a double filter holder is used. Press on choosed dose-button. Start brewing immediately. The coffee deteriorates already after 10 seconds in the hot group.

When delivery is finished, remove the cup and serve it.

## 8.3 How to make cappuccino

For making cappuccino, fresh milk must be "frothed" to give a foam which will be poured over the espresso coffee. A cappuccino consist of 1 third espresso and 2 thirds frothed milk.

Brewing an espresso in a cappuccino cup.

Open steam tap position the steam pipe and switch the steam on for 1 or 2 seconds to clean away milk residues.
For heating milk, use a jug containing at least three inches of milk.

Approach the jug to the stam pipe so as to immerse the spout in the milk.Slowly open the steam tap and hollow the jug so that the nozzle is placed exactly at surface. Keep the jug in this position, until you can feel a heat outside the jug.
Rise the jug a couple of centimetre and angle the jug until you get a wave motion in the milk.

With this procedure you can blow a "vanilla sauce similar" milk-froth. It is that kind of froth they use in Italy and with some practice you can draw and design shapes in your cappuccino and caffé latte.

Then quickly close the steam. Remove the jug from the pipe and pour the frothed milk over the espresso coffee.

**N.B. Heat up** the milk to 60°C - 65°C

**N.B.: the steam pipe is very hot and should not be touched until it has cooled.**

Clean the milk from the pipe as soon as possible to prevent it from drying and becoming difficult to remove.
**Inform the customer** as soon as possible that the drink is very hot. Keep extra frothed milk for the next cappuccino.

## 9.1 Daily cleaning

**Preferably done in the evening:**

- **CLEAN** nozzles, gasket, filterholder and the bayonets in groups.
Use a clean dishing brush or the angled cleaning brush.

- **RINSE** 1 cup filter / 2 cup filter and filterholders with hot water. Use detergent intended for coffee machines or dishing machines to remove oil and dirt

- Put the rubber pad in 2 cup filter. Hook filterholder in the group and start a brewing.
Varying unhook and hook filterholder when brewing is going on.
The hot water will be pressed out between groups and filterholder and cleaning the bayonets in group and filterholder gasket.

**N.B.: the steam pipe is very hot and should not be touched until it has cooled.**

- **CLEAN** Drip tray (placing the cups)..

- **CLEAN** Steam pipes directly after they have been in use.

## 9.2 Weekly cleaning

- **CLEAN** Group and nozzles:
See chap. 7.7

**- Clean** the tray and the cup support grid.
Carefully clean the steam pipes used for heating beverages immediately after use, so as to avoid the formation of deposits which could block the delivery nozzles and also to prevent different types of beverage being heated.

- **Cleaning** Machine: outwardly
Use a wet cloth (which not scratcing).
You must not use solvent or alcohol!

### 9.4 Instructions for regenerating descaling filter

**The instructions given below should be followed to regenerate the descaling filter:**

1. Place a container with a capacity of at least 2 litres under pipe **E**. Move levers **C** och **D** from left to right.

2. Remove the lid by unscrewing knob **G** and put salt (normal kitchen salt) in descaling filter (pos. 5): 1 kg for 8- litres descaling filter and 2 kg for 16-litres descaling filter.
Then refit lid and move tap lever **C** from right to left (fig. 6) so that the salty water can flow through pipe **F**. When the water is pure, reset lever **D** from right to left (fig. 7). Shake filter meanwhile regeneration goes on.

**IMPORTANT!**
Regeneration must be done every 15 days for a daily coffee consumption of between 1 and 2 kg.
If consumption is greater than this, regeneration should be done every 7 days.
See instructions for descaling filter.

**N.B.**
It is very important to regenerate the descaling filter. Failure to regenerate the resins in the descaling filter causes calcification in the boiler, the solenoid valves and the hydraulic circuit.

These deposits have a negative influence on the machine´s performance and reliabillity and can even cause serious damage which will lead to the intervention of the assistance service for cleaning the boiler.

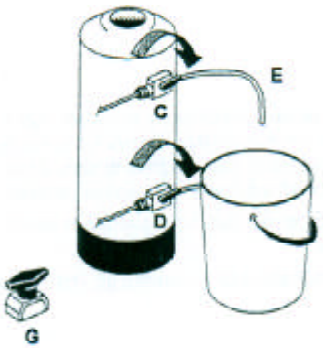



FIG. 5

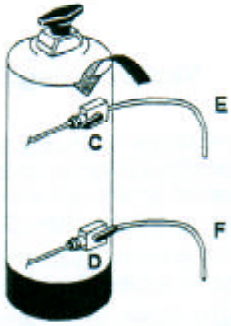



FIG. 6

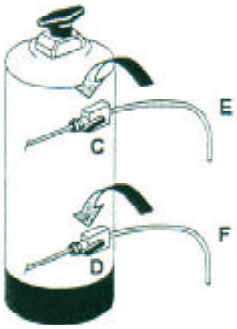



FIG. 7

**Identifying problems:**

- Always ensure that there is enough ground coffee for at least one dose in the grinder-doser´s reservoir.
- If the coffee drops are to slowly then grinding is propably too fine. Vice-versa, if it drops to fast, the grinding is too coarse.
- Remember that the machine´s operating process forces the water over the coffee at high pressure. If contact between the water and the ground coffee lasts more than 30 seconds, the coffee will taste unpleasent and bitter. The effect is called over-extraction.
- Always heat the cup by rinsing it in hot water. If the cup is cold, the abrupt temperature change of the espresso coffee will change its taste.
- Never load the filter holder without making an immediate delivery; the ground coffee would ”burn” in the group and the espresso obtained would be very bitter.

**Attention: ALWAYS UNPLUG THE ELECTRICITY when carrying out maintenance checks or operations.**

**The following maintenance operations must be carried out by specialized personnel, authorized by the manufacturer. Do not perform makeshift or ad-hoc repairs, and never use non-original spare parts.**

| | |
|---|---|
| **Problem:** | The group does not deliver water and the pump is noisy. |
| Cause 1: | The water mains tap or the softener taps are shut. |
| **Cures:** | **Open the taps.** |
| Cause 2: | The water entry union filter is obstructed. |
| **Cures:** | **Dismantle and clean.** |
| **Problem:** | The group does not deliver water. |
| Cause 1: | The jet is obstructed. |
| **Cures:** | **Remove the jet plug, check and clean or replace as necessary.** |
| Cause 2: | The injector is obstructed. |
| **Cures:** | **Dismantle and clean, replace if necessary.** |
| | **N.B. check the regeneration of the softener resins.** |
| Cause 3: | (Only for versions with electronic dosing): the entry union of the doser is obstructed. |
| **Cures:** | **Dismantle and clean.** |
| Cause4: | The solenoid valve will not open. |
| **Cures:** | **The coil is not getting power; check and correct.** |
| | **- The coil is broken; replace.** |
| | **- The core is blocked; preferably replace the complete solenoid valve.** |
| **Problem:** | The boiler is under pressure but the group does not heat up. |
| Cause 1: | Air bleeding of the boiler did not occur during the water heating stage. |
| **Cures:** | **When cold check that the air vacuum valve is not blocked shut. Replace if necessary.** |
| Cause2: | The water heating circuit is partially obstructed. |
| **Cures:** | **Check the group´s inlet and outlet pipes and unions. Clean and replace if necessary.** |
| | **N.B. Check the regeneration of the softener resins.** |
| **Problem:** | The boiler will not heat up. |
| Cause1: | The heating element is broken. |
| **Cures:** | **Replace.** |
| Cause2: | The heating element is not receiving power. |
| **Cures:** | **- The safety thermostat is faulty; check and replace if necessary.** |
| | **- The pressure switch is faulty;. check and replace if necessary.** |
| | **- One or several Triacar is broken.** |

**Fault:**

| | |
|---|---|
| **Problem:** | The water level control provides water when it should not. |
| Cause 1: | The level sensor/control centre electrical connection is broken. |
| **Cures:** | **Repair.** |
| Cause 2: | The frame earthing/control centre electrical connection is broken. |
| **Cures:** | **Repair.** |
| Cause 3: | The level sensor is dirty. |
| **Cures:** | **Clean. When dismantling do not unthread it from the insulator but remove it complete with the union.** |
| Cause 4: | The electronic control centre is defective. |
| **Cures:** | **Replace.** |

| | |
|---|---|
| **Problem:** | The water level control provides water when it should not. |
| Cause 1: | The solenoid valve coil is defective (earth fault). |
| **Cures:** | **Check and replace if necessary.** |
| Cause 2: | The solenoid valve lifter is blocked. |
| **Cures:** | **Check and replace solenoid valve if necessary.** |

| | |
|---|---|
| **Problem:** | The water in boiler is still filling up and the safety valve leaks out water. |
| Cause 1: | Level sensor is not connected. |
| **Cures:** | **Check and replace if necessary.** |
| Cause 2: | There is a contraries object inside the solenoid valve and the automatic level regulation. |
| **Cures:** | **Check and replace if necessary.** |
| Cause 3: | Gasket is trayed. |
| **Cures:** | **Check and replace if necessary.** |

**Fault:**

| | |
|---|---|
| **Problem:** | Machine is only brewing while the heating element is charged. |
| Cause 1: | Neutral conductor is missing. (electric delivery). |
| **Cures:** | **Check and cure.** |
| **Problem:** | Regulary dosage when machine is brewing is faulty. (only version with dosage). |
| Cause 1: | Flowmeter leaks out water. |
| **Cures:** | **If flowmeter is wet on the outside and if diod plate is wet, replace flowmeter.** |
| Cause 2: | Flowmeter does not operate in a satisfactory way. (rotor spins unevenly.) |
| **Cures:** | **Replace flowmeter.** |
| Cause 3: | If photo-diodes at the flowmeter do not give any electric signals to the electronic unit. |
| **Cures:** | **Check the photo-diodes operational suitability with an impulse indicator. If it not acts, replace flowmeter.** |
| Cause 4: | Solenoid valve (brewing) leaks when machine is brewing. |
| **Cures:** | **Check and replace gaskets or replace solenoid valve.** |
| Cause 5: | Expansion valve leaks when machine is brewing. |
| **Cures:** | **Check the adjustment and the gasket.** |
| **N.B.** | **When adjusting expansion valve. Do not unscrew any connections when boiler is under pressure.** |
| Cause 6: | Push-button pad are operating unevenly. |
| **Cures:** | **Check cable connections. If this not helps, try a new push-button pad.** |
| **Problem:** | Economize the coffee powder in best way |
| Cause 1: | Clogged water pump. |
| **Cures:** | **Check pressure on manometer when machine is brewing and adjust pressure. To: 8,5 - 9 bar.** |
| Cause 2: | Uncorrect adjustment of expansion valve that leaks when machine is brewing. |
| **Cures:** | **Adjust expansion valve.** |
| Cause 3: | Uncorrect adjustment of brewing temperature. |
| **Cures:** | **Check temperature with the coffee outlet. Use a thermometer.**<br>**Adjust pressure control device.** |
| Cause 4: | Solenoid valve leaks, when machine is brewing. |
| **Cures:** | **Check and replace if necessary.** |
| Cause 5: | The grinding is not correct.(coffee powder are to finely grounded or coarse-grounded). |
| **Cures:** | **Check brewing time and adjust the grinding.** |
| Cause 6: | Nozzle and filter are clogged and dirty. |
| **Cures:** | **Check and replace if necessary.** |
| **Problem:** | Tap and handgrip for water/steam are closed, still it leaks from water pipe and steam pipes. |
| Cause 1: | Gaskets is frayed or the pipe brackets are dirty. |
| **Cures:** | **Check and clean, replace if necessary.** |
| **Problem:** | If it leaks out water or steam when open tap handgrips for steam/water. |
| Cause 1: | Valve piston gasket is worn. |
| **Cures:** | **Check and replace if necessary.** |

**Fault:**

| | |
|---|---|
| **Problem:** | Leakage between group and filterholder when machine is brewing. |
| Cause 1: | Brew groups filter spring are worn out. |
| **Cures:** | **Replace it.** |
| Cause 2: | 1 cup filter/2 cup filter is damaged. |
| **Cures:** | **Replace it.** |
| **Problem:** | Water leaks from the expansions valve. |
| Cause 1: | Gasket, expansions valve are worn out. |
| **Cures:** | **Replace.** |
| Cause 2: | The pumps by-pass valve failes. |
| **Cures:** | **Check and trashing the valve piston.** |

## 11. Shut-down and dismantling

Shutting the machine down should be done by authorized personnel.

Eliminate the pressure from the hydraulic circuit, disconnect the electric flex from the mains power supply network and dispose of substances which are potentially harmful to the environment.

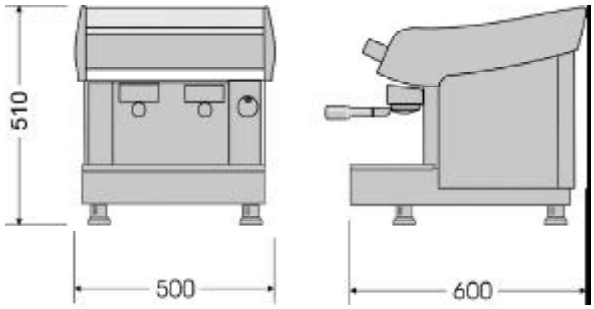
Place the machine in a suitable place, out of the reach of children or unsuitable people.

**For dismantling the machine as refuse, return it to the supplier or take it to an authorized refuse collection centre.**

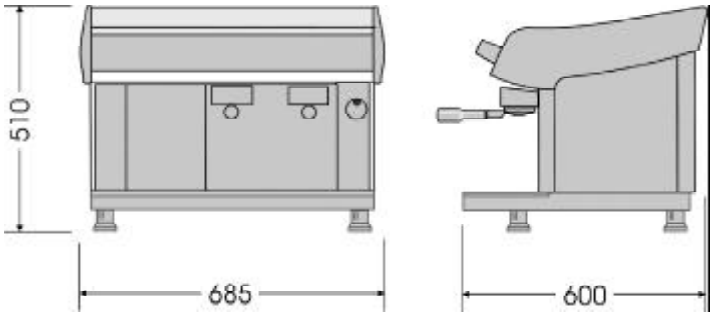
**Do not dispose of it in the environment.**

## 12. Technical Data — Crema Compact och Crema Digital 2-4 groups

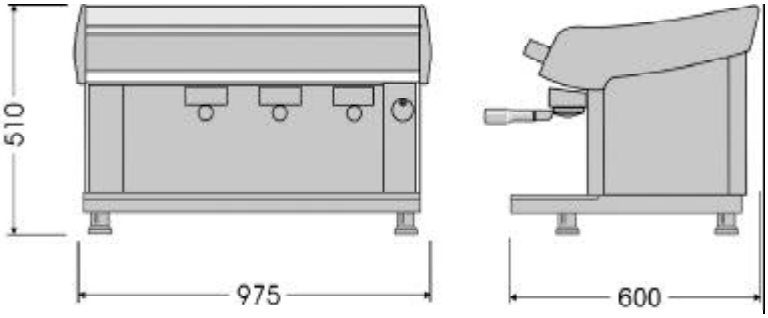
**Crema Compact**



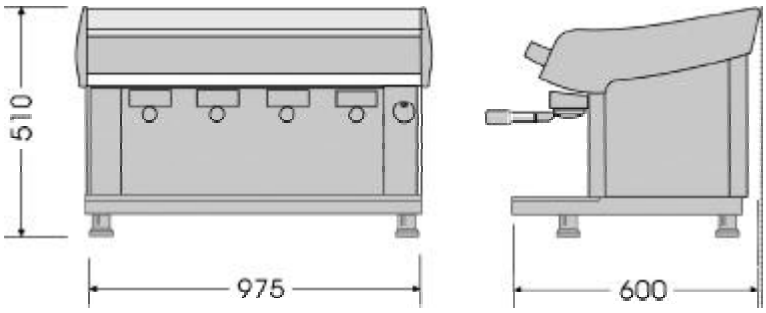

**Crema Digital2 group**




**Crema Digital 3 group**




**Crema Digital 4 group**




| Model | Group | Tankage (L) | Voltage V-Hz | Capacity (W) | Current consumption(A) |
|---|---|---|---|---|---|
| Crema Compact | 2 | 6,0 | 240V1N - 50/60Hz | 2670 | 11,1 |
| Crema Digital/2 | 2 | 11,5 | 400V3N - 50/60Hz | 4500 | 3 x 7,2 |
| Crema Digital/3 | 3 | 17,5 | 400V3N - 50/60Hz | 6000 | 3 x 9,6 |
| Crema Digital/4 | 4 | 17,5 | 400V3N - 50/60Hz | 6000 | 3 x 9.6 |

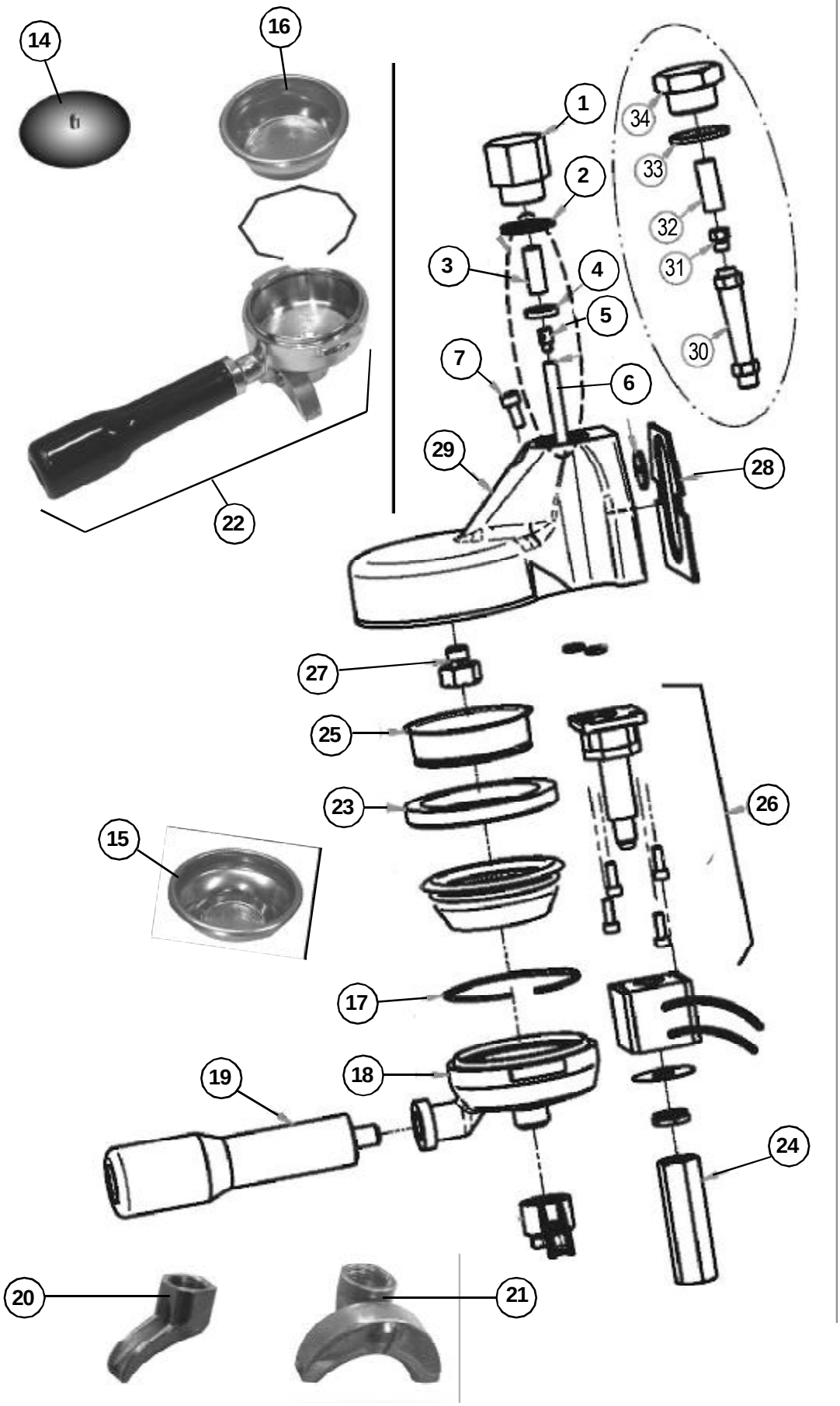
## 13. Spare part list — Crema Compact och Digital

| Description: | Art.no. | Pos.no | Comp2 | Comp2TA | Dig2TA | Dig3TA | Dig4TA |
|---|---|---|---|---|---|---|---|
| Plug | C 30200035 | 1 | - | - | - | - | - |
| Gasket, plug | C 50010040 | 2 | - | - | - | - | - |
| Tubular filter(Trumpet jet) | C 70000009 | 3 | - | - | - | - | - |
| Plate,teflon (Trumpet jet) | C 50030000 | 4 | - | - | - | - | - |
| Trumpet jet, teflon | C 30200060 | 5 | - | - | - | - | - |
| Jet support, teflon | C 30200025 | 6 | - | - | - | - | - |
| Screw/ (body group) | C 25091250 | 7 | - | - | - | - | - |
| Machine foot | C 70000050 | 11 | - | - | - | - | - |
| Rubber pad (for auto clean) | C 75000000 | 14 | - | - | - | - | - |
| 1 cup, filter | C 75000030 | 15 | - | - | - | - | - |
| 2 cup, filter | C 75000040 | 16 | - | - | - | - | - |
| Filter spring | C 75000120 | 17 | - | - | - | - | - |
| Filter holder | C 75000110 | 18 | - | - | - | - | - |
| Handgrip for filterholder | C 75000105 | 19 | - | - | - | - | - |
| 1 ways, spout | C 75000050 | 20 | - | - | - | - | - |
| 2 ways, spout | C 75000060 | 21 | - | - | - | - | - |
| Filterholder Compl. | C 75000200 | 22 | - | - | - | - | - |
| Gasket filter holder | C 75000080 | 23 | - | - | - | - | - |
| Group discharging | C 30000040 | 24 | - | - | - | - | - |
| Rose | C 75000010 | 25 | - | - | - | - | - |
| Electrovalve, group | C 60000110 | 26 | - | - | - | - | - |
| Diffuser, group | C 30200040 | 27 | - | - | - | - | - |
| Plain seal, body group | C 50000010 | 28 | - | - | - | - | - |
| Body, group | C 30200010 | 29 | - | - | - | - | - |
| **Valid to older models.** | **parts of brew group:** | | | | | | |
| Jet support | C 30200020 | 30 | - | - | - | - | - |
| Trumpet jet | C 30200050 | 31 | - | - | - | - | - |
| Tubular filter | C 70000009 | 32 | - | - | - | - | - |
| Teflon gasket | C 50010040 | 33 | - | - | - | - | - |
| Plug 1/2 | C 30200030 | 34 | - | - | - | - | - |
| Tap body | C 30370070 | 35 | - | - | - | - | - |
| Closing block | C 30370060 | 36 | - | - | - | - | - |
| Copper gasket | C 30370030 | 37 | - | - | - | - | - |
| Tap connector | C 30370010 | 38 | - | - | - | - | - |
| Axis joint | C 30370020 | 39 | - | - | - | - | - |
| Axis spring | C 30370040 | 40 | - | - | - | - | - |
| Tap knob steam/water | C 40000020 | 41 | - | - | - | - | - |
| Cotter, Knob/steam | C 30370110 | 41A | - | - | - | - | - |
| Hot water pipe | C 30370080 | 42 | - | - | - | - | - |
| Steam pipe Comp. | C 30370090 | 43 | - | - | - | - | - |
| Steampipe Take Away | C 35010050 | 43 | - | - | - | - | - |
| Steam valve compl. | C 35010050 | 44 | - | - | - | - | - |
| Motor 110V | C 60000028 | 45a | - | - | - | - | - |
| Silent block | C 50100000 | 46 | - | - | - | - | - |
| Pump, compl. | C 60000030 | 47 | - | - | - | - | - |
| Retention valve | C 65000010 | 48 | - | - | - | - | - |
| Pump filter female screw | C 70000000 | 49 | - | - | - | - | - |
| Pump tubular filter | C 70000008 | 50 | - | - | - | - | - |

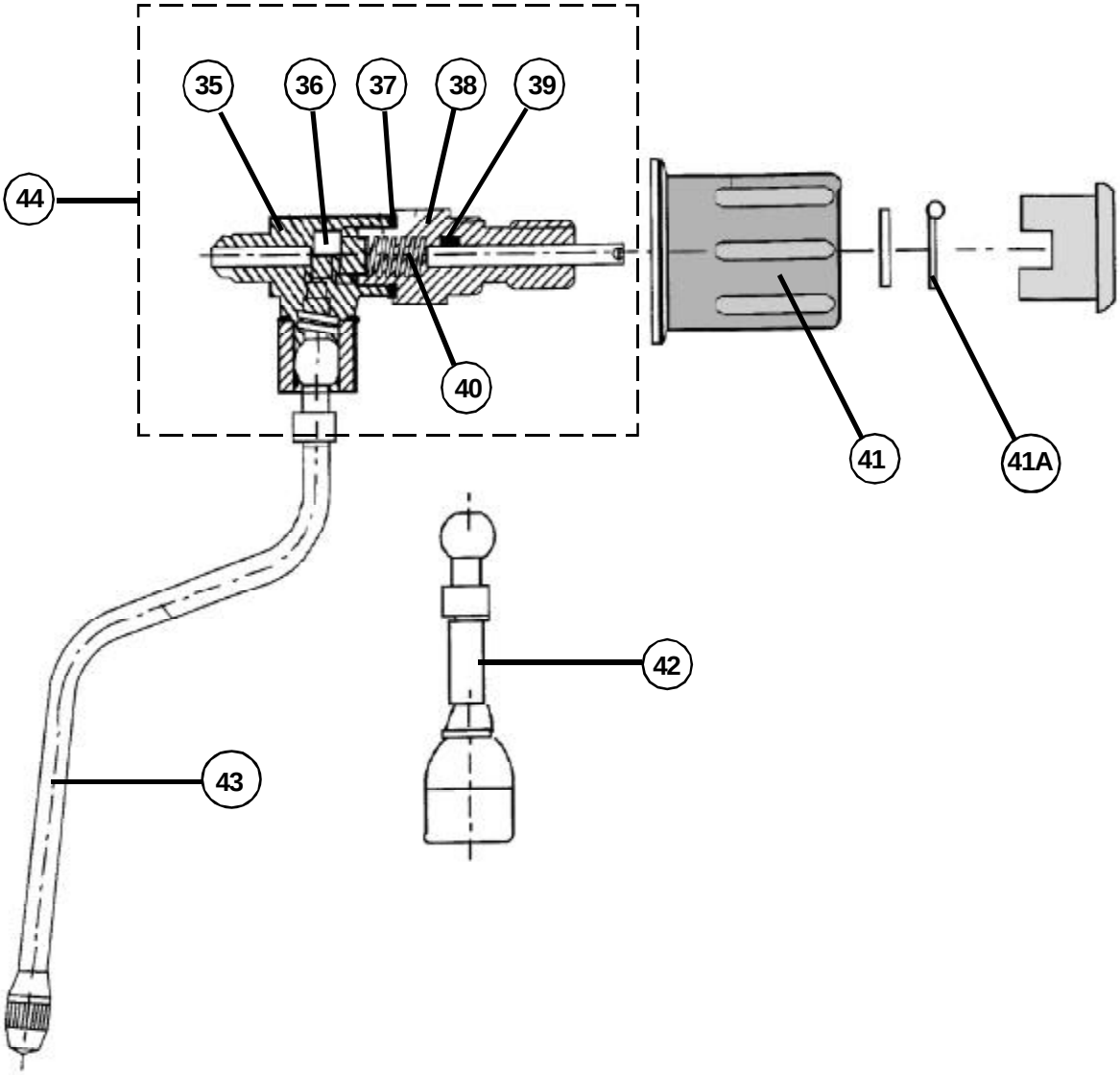
## 13. Spare part list — Crema Compact och Digital

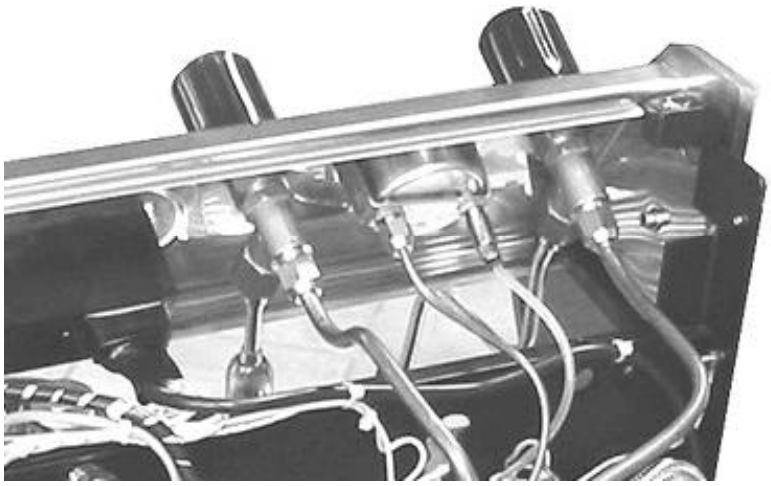
| Benämning: | Artnr. | Pos.nr | Comp2 | Comp2TA | Dig2TA | Dig3TA | Dig4TA |
|---|---|---|---|---|---|---|---|
| Filter support | C 70000001 | 51 | - | - | - | - | - |
| Pump Raccord 3/8x3/8 | C 30000240 | 52 | - | - | - | - | - |
| Inox flexible tube hose 180cm | C 35900180 | 61 | - | - | - | - | - |
| Inox flexible tube hose 55 cm | C 35900040 | 62 | - | - | - | - | - |
| Steam tap tube | C 35110113 | 63 | - | - | - | - | - |
| Teflongasket ¼ | C 50010020 | 70 | - | - | - | - | - |
| Inferior right fitting 1/2 X 1/2 X1/4. | C 30000210 | 71 | - | - | - | - | - |
| Teflongasket 1/2 X 5 | C 50010010 | 72 | - | - | - | - | - |
| Injector 1/4 | C 30000220 | 73 | - | - | - | - | - |
| Connector 1/4 X 1/4 | C 30000510 | 76 | - | - | - | - | - |
| Flowmeter | C 60100050 | 77 | - | - | - | - | - |
| Element 2500W-240V Compact | C 38025001 | 78 | - | - | - | - | - |
| Element 4500W-240/400V 2 groups | C 38045000 | 78 | - | - | - | - | - |
| Element 6000W-240/400V 3-4groups | C 38060000 | 78 | - | - | - | - | - |
| Teflon gasket for heating element | C 50010030 | 79 | - | - | - | - | - |
| Boiler 6 liter Compact | C | 80 | | | | | |
| Boiler 11,5 liter 2 groups | C 15100020 | 80 | - | - | - | - | - |
| Boiler 17,5 liter 3 groups | C 15100030 | 80 | - | - | - | - | - |
| Boiler 17,5 liter 4 groups | C 15100040 | 80 | - | - | - | - | - |
| Pressure gauge tube Compact | C | 81 | | | | | |
| Pressure gauge tube 2 groups | C 35110114 | 81 | - | - | - | - | - |
| Pressure gauge tube 3-4 groups | C 35170111 | 81 | - | - | - | - | - |
| Pressure gauge 3-phases | C 60000000 | 82 | - | - | - | - | - |
| Thermic superior connector 1/2 X1/2. | C 30000200 | 85 | - | - | - | - | - |
| Set of Magnets | C ESC00100 | 86 | - | - | - | - | - |
| Probe | C 60100040 | 88 | - | - | - | - | - |
| Safety valve | C 65000200 | 90A | - | - | - | - | - |
| Overload valve | C 65000110 | 90B | - | - | - | - | - |
| 3-exit connector1/4 X 1/4 X1/8, Compact | C 30000110 | 91 | - | - | - | - | - |
| 2-exits connector 1/4 X 1/8 | C 30000100 | 91 | - | - | - | - | - |
| Drain hose 1,5 metre | 2135900010 | 92 | - | - | - | - | - |
| Waste cup, plastic | C 70000010 | 93 | - | - | - | - | - |
| Main switch | C 40000050 | 96 | - | - | - | - | - |
| Indicator lamp | C 60100250 | 98 | - | - | - | - | - |
| Manometer | C 60000065 | 100 | - | - | - | - | - |
| Brew switch (hand operated) | C 60900050 | 101 | - | - | - | - | - |
| Electronic switcboard (blue) | C 60100016 | 102 | - | - | - | - | - |
| Knob, main switch | C 40000050 | 103 | - | - | - | - | - |

## 14. Exploded view Brewing / Filter holder Crema

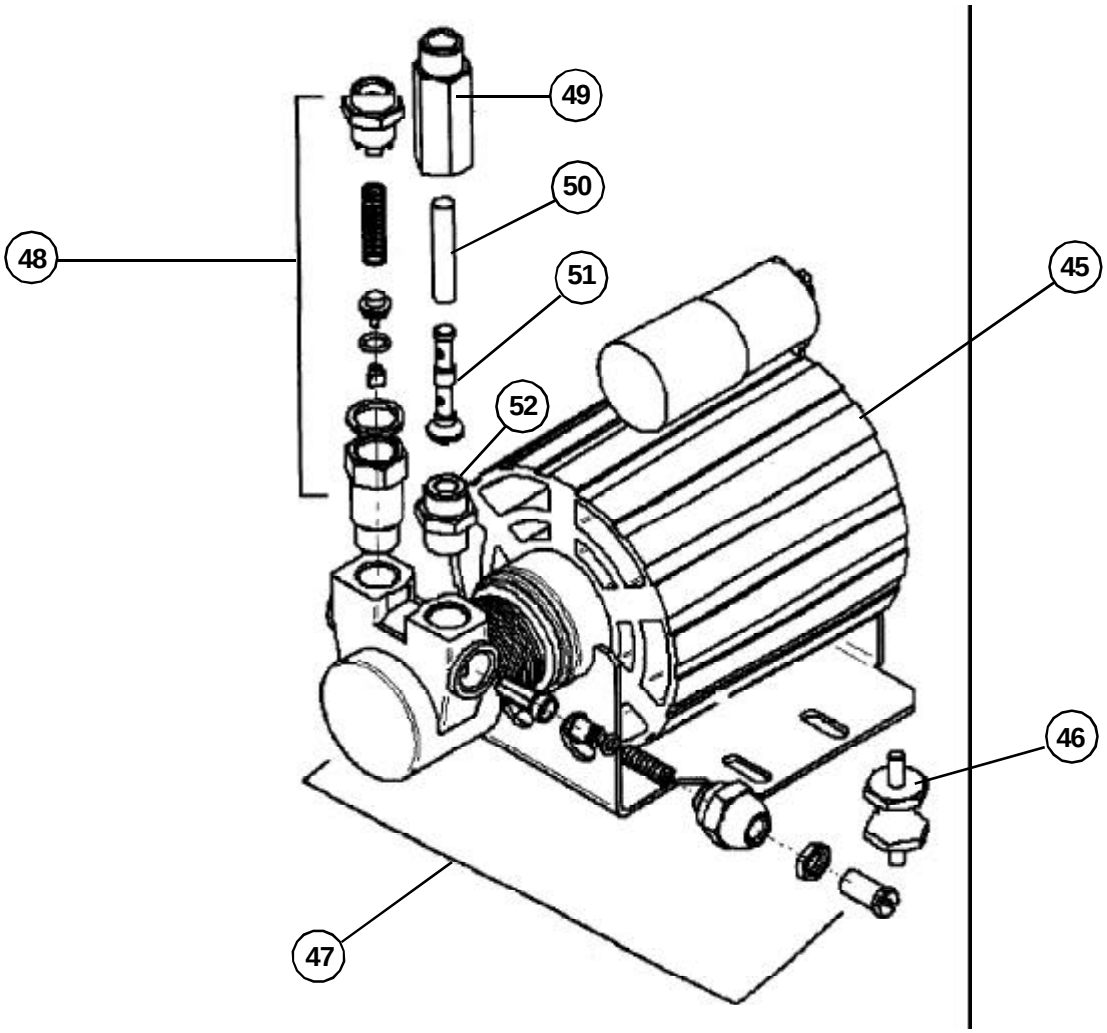


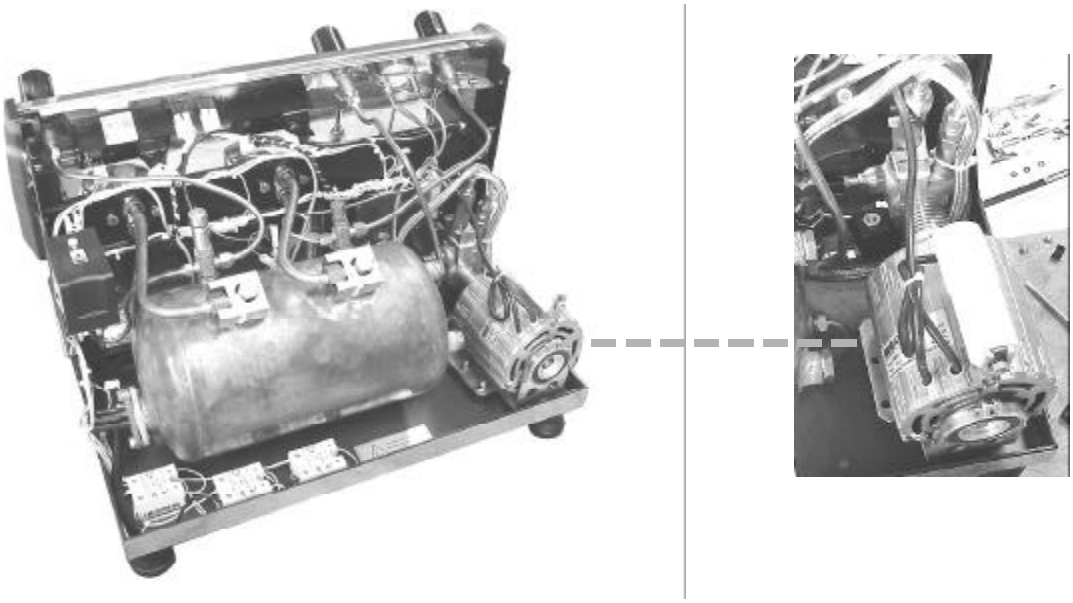
## 14. Exploded view Steam / Hot water knob Crema

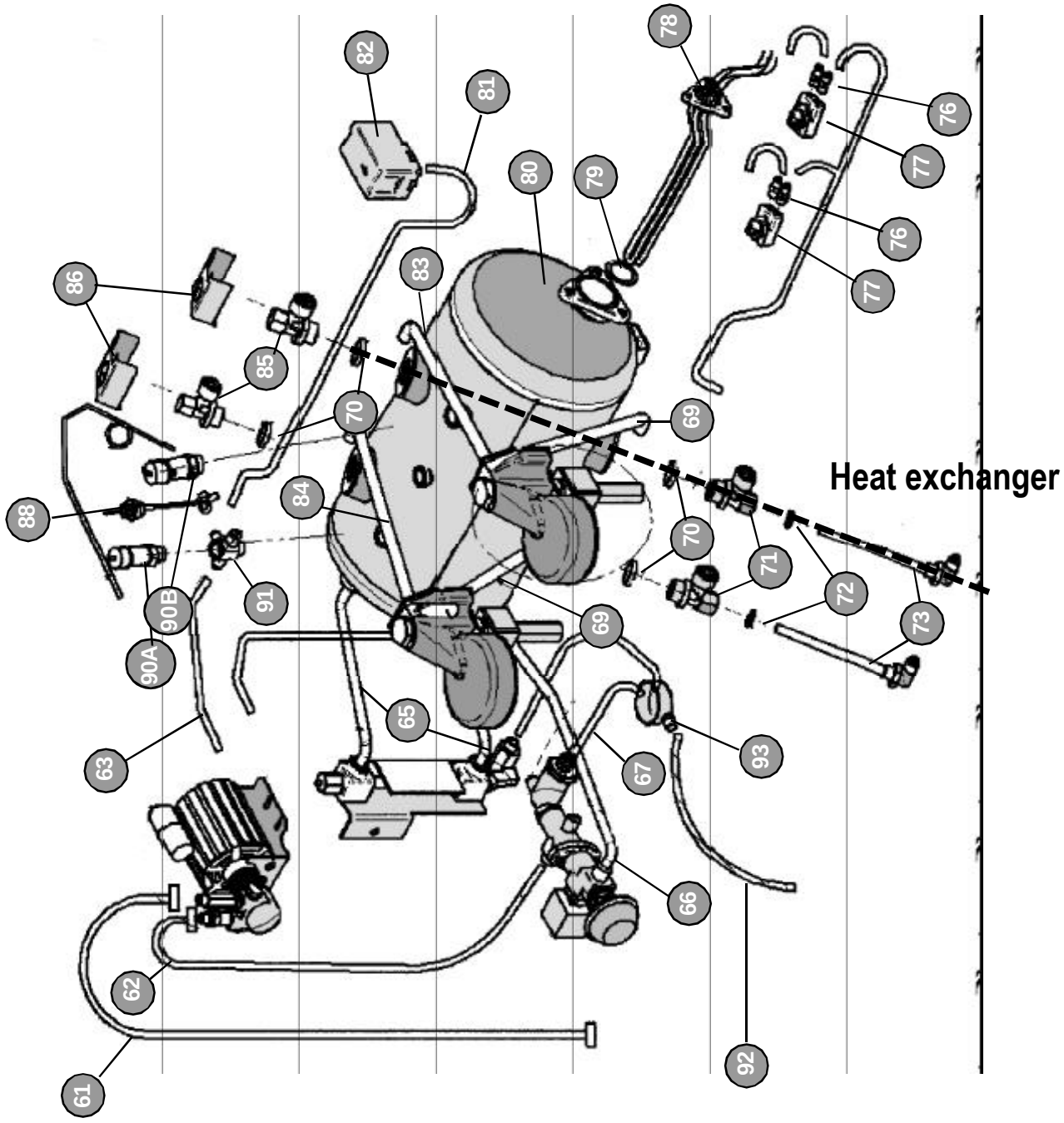


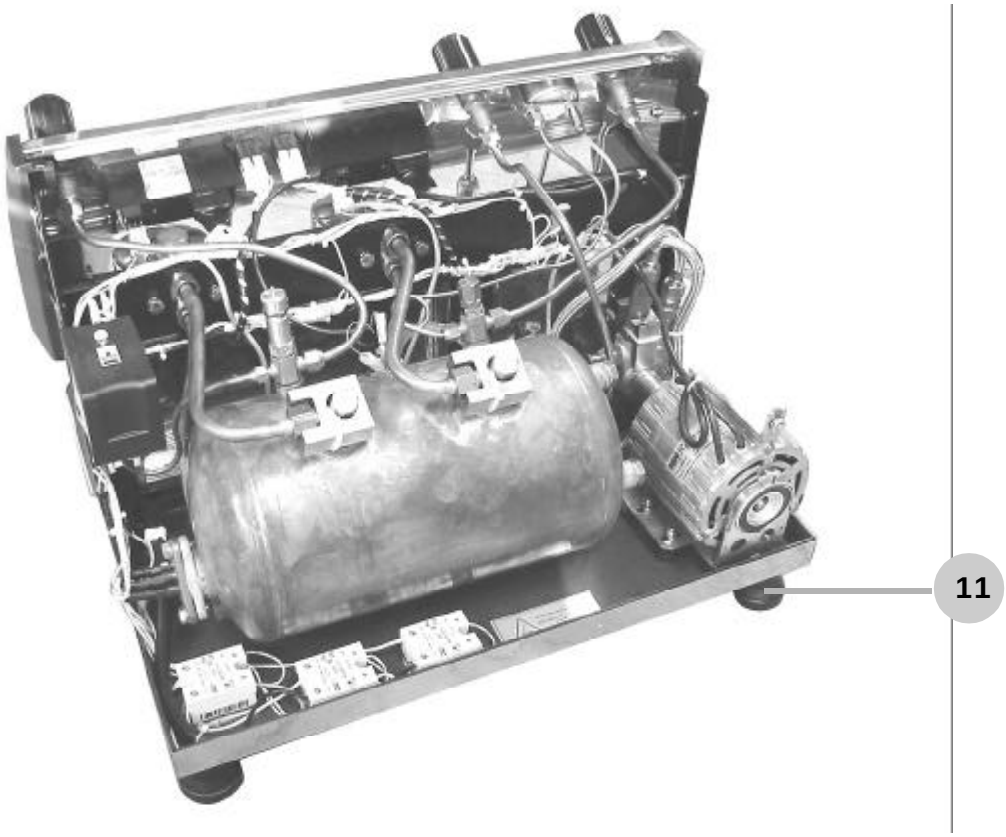



## 14. Exploded view Motor pump Crema

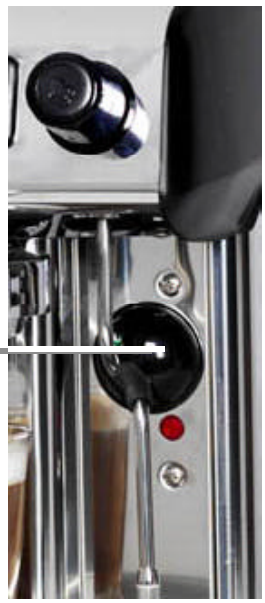


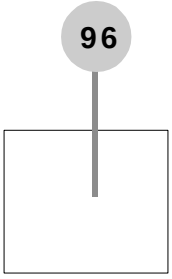

78
82
81
76
77
80
79
76
77
86
83
85
70
69
Heat exchanger
88
84
70
71
72
73
91
90B
69
90A
65
93
63
67
66
62
61
92

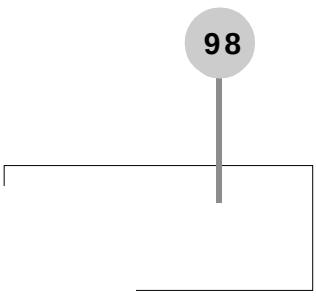

11

100
101

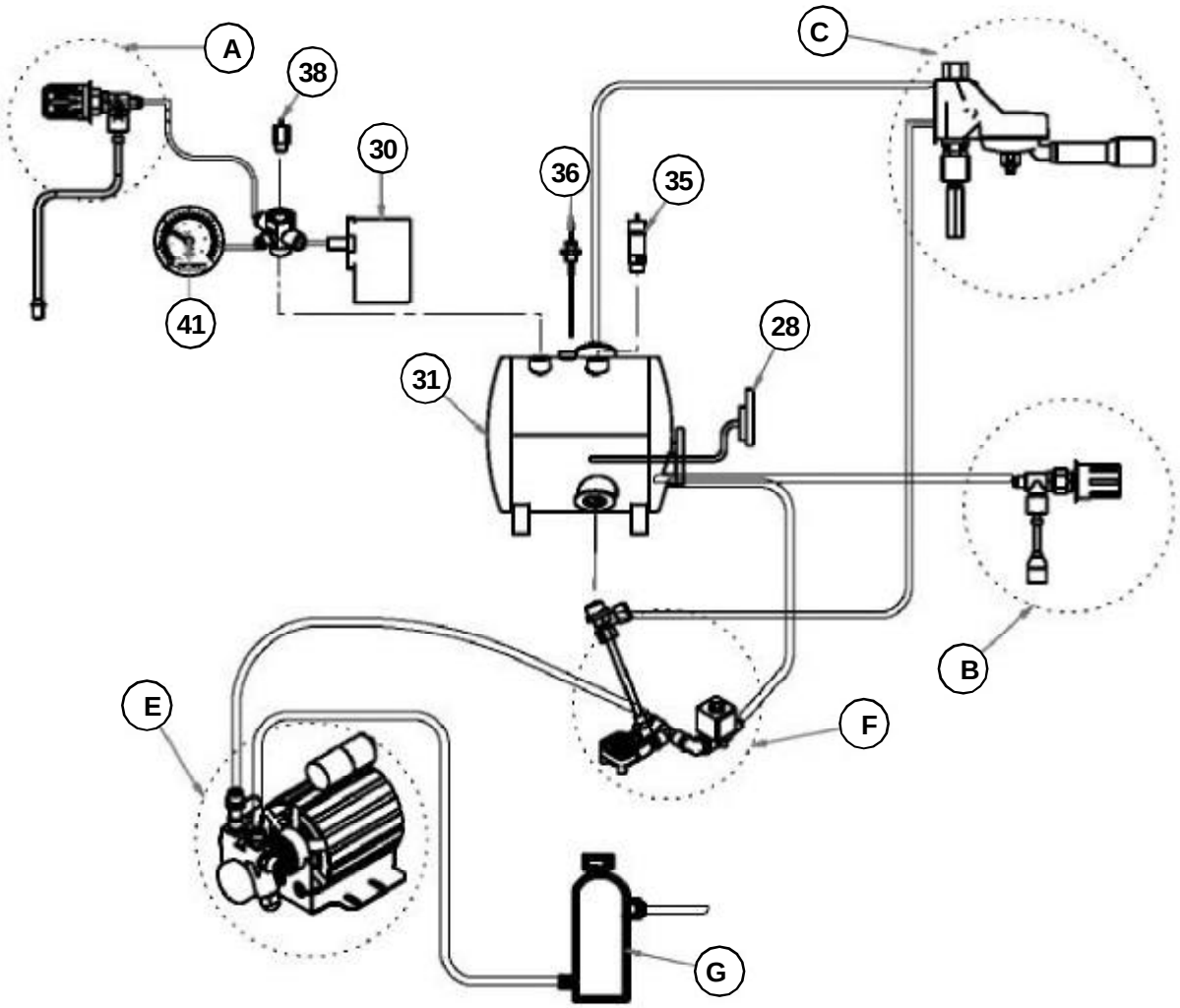

103

102


96


98

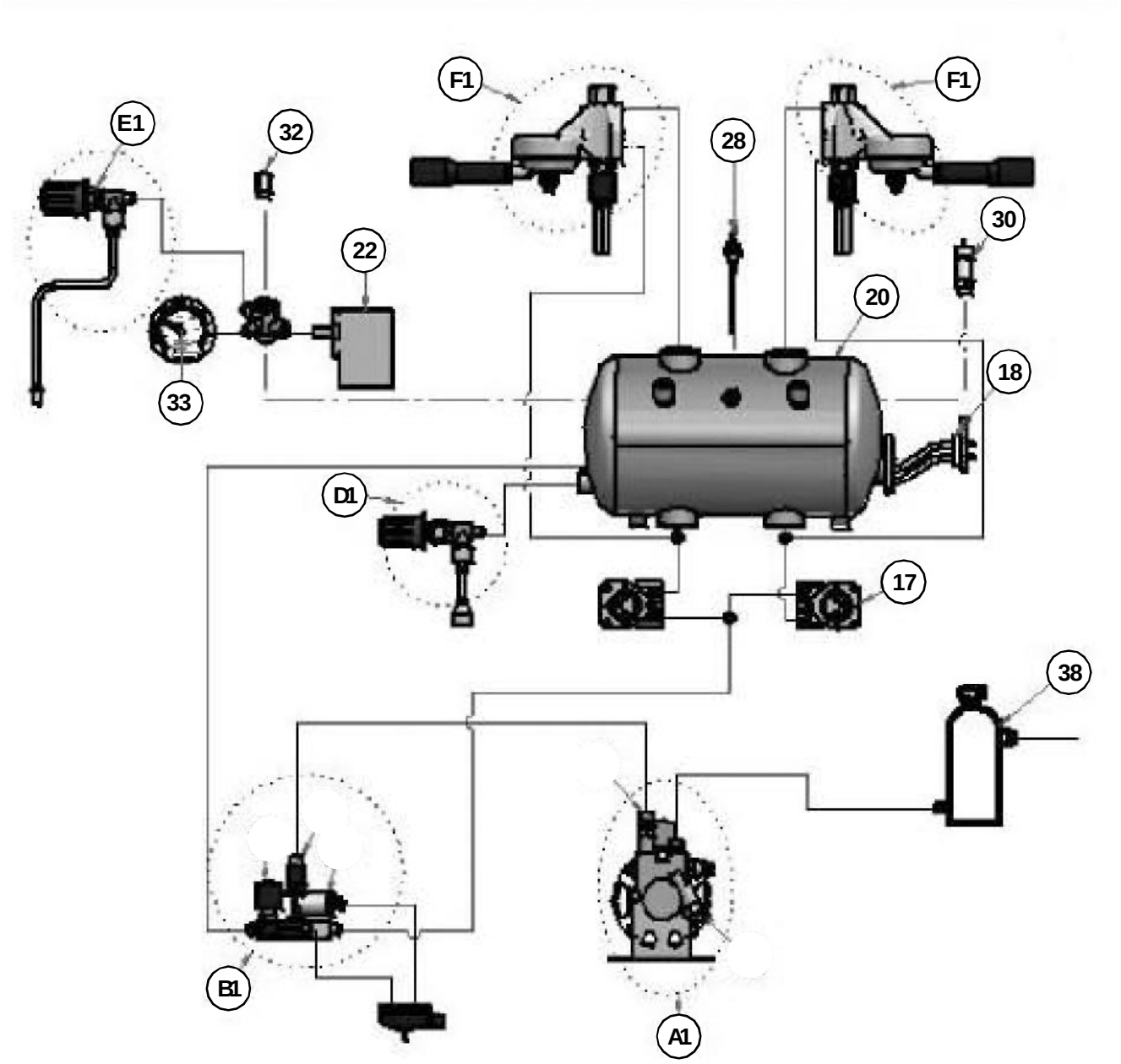
## 15. Flow diagram




A. Ångkran-sats / Steam tap set
B. Hetvattenkran-sats / Water tap set
C. Bryggrupp / Brewing unit set
E. Motorpump / Motor-pump set
F. Vattenpåfyllnadssats / Charging/loading/inlet & draining set
G. Avkalkningsfilter / Water softener

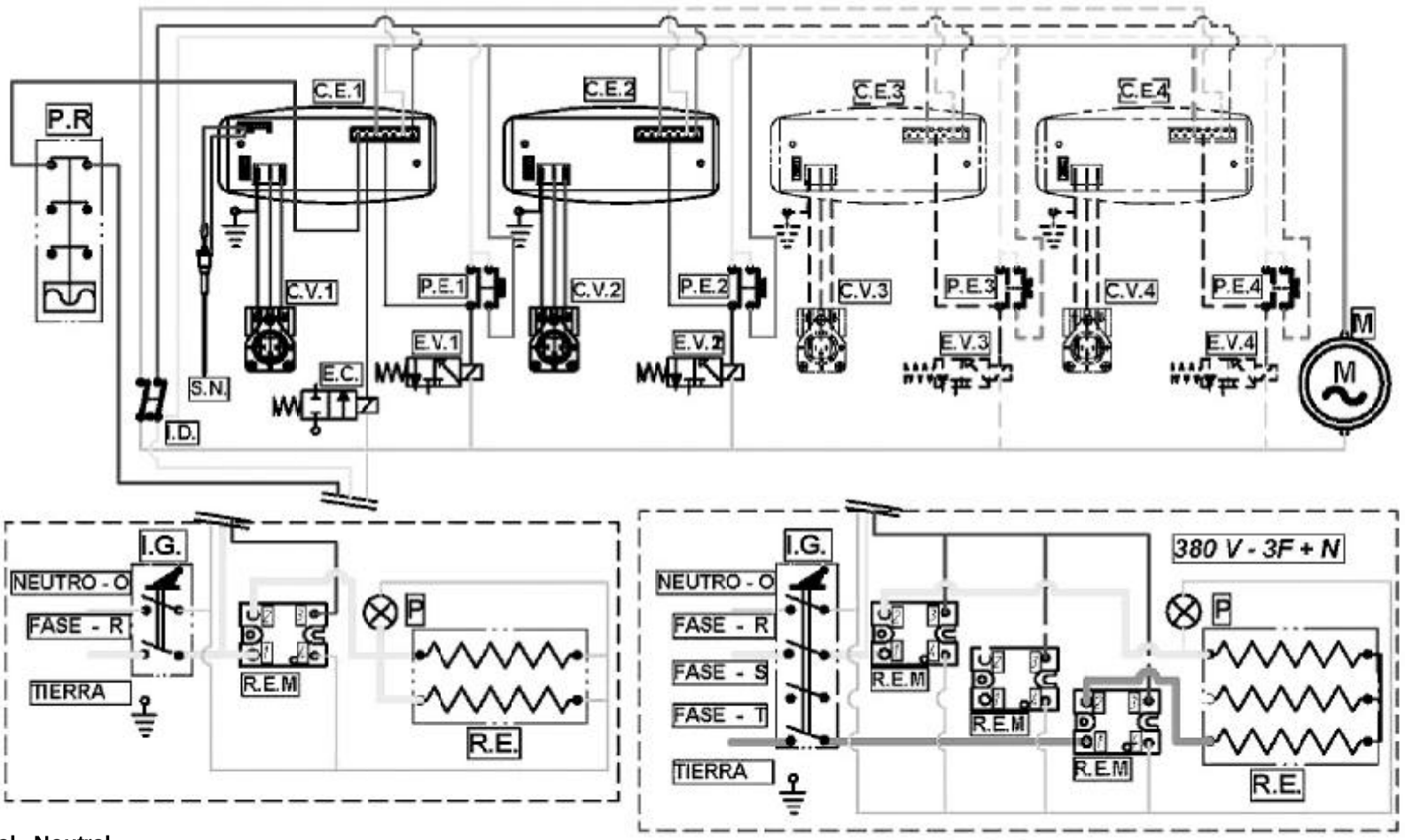
30. Pressostat - 3 fas / Three phase presostat (pressurestat/pressure switch)
31. Tank / Boiler
35. Övertrycksventil / Safety valve
36. Nivåsensor / Probe (level probe)
28. Värmeelement / heating element

## 15. Flow diagram




17. Doserturbin / Flowmeter
18. Värmeelement / Heating element
20. Tank, 2 grupps / 2 groups boiler
22. Pressostat 3 fas / Three phase presostat (pressurestat/pressure switch)
28. Nivåsensor / Probe (level probe)
30. Övertrycksventil / Safety valve CN 10
32. Vakuumventil / Air relief valve
33. Manometer (pressure reader/gauge)
38. Filter

A.1. Motorpump / Motor-pump
B.1. Laberinth MC (=hign group)
D.1. Hetvattenkransats / Water tap set
E.1. Ångvattenkransats / Steam tap set
F.1. Bryggrupp / Brewing unit set
X. Avkalkningsfilter / Water softener




**NEUTRO - neutral - Neutral**
**FASE - phase - Fas**
**TIERRA - ground - Jord**

**C.E.** - electronic switchboard - knappsats (blå)
**C.V.** - flowmeter - doserturbin
**E.C.** - charging electrovalve - magnetventil (2 vägs fyllning)
**E.V.** - group electrovalve (solenoid valve) - magnetventil på bryggrupp, 3 vägs
**I.G.** - main switch - huvudströmbrytare
**P.E.** - distributing group - manuell bryggbrytare
**P.R.** - presostat - pressostat
**M.** - motor pump - motorpump
**R.E.** - heating element - värmeelement
**P.** - pilot - indikator lampa
**S.N.** - level probe - nivå sensor

# COFFEE QUEEN

## Crema Compact
## Crema Digital

**FOR SERVICE**
**Please contact your retail dealer**

| Your retail dealer |
| --- |
| ..... |
| ..... |
| ..... |

**COFFEE QUEEN AB Box 960, 67129 ARVIKA** besöksadress; korpralsv. 1B,
Tel vxl; +46 (0)570-477 00, service +46 (0)570-477 30, lager +46 (0)570 477 20, Fax; +46 (0)570 477 19
E-mail: info@coffeequeen.se www.coffeequeen.se

**Art. nr/Art. 170436**